

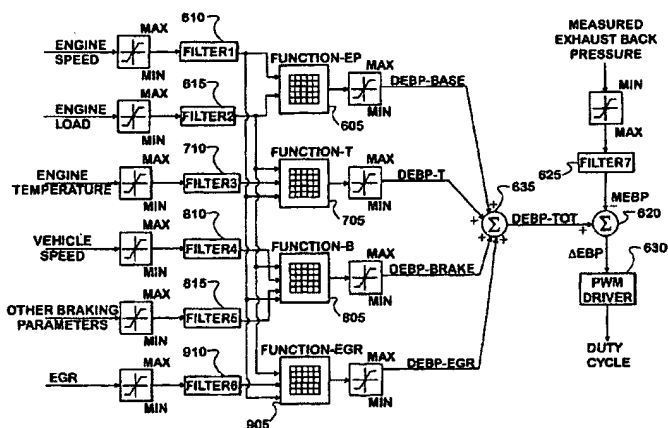
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(54) Title: CONTROL OF A VARIABLE GEOMETRY TURBOCHARGER BY SENSING EXHAUST PRESSURE



(57) Abstract: There is provided a system and method for using an engine's exhaust back pressure (1210) to control a variable geometry turbocharger. The control system determines a desired exhaust back pressure (1205) based on engine parameters. The desired exhaust back pressure (1205) is then compared with a measured exhaust back pressure (1210) to determine the difference (1215) between the measured (1210) and desired (1205) exhaust back pressures. The difference value (1215) is used to determine the duty cycle (1220). In an alternate embodiment, the exhaust gas pressure (1615) is used to adjust the duty cycle (1605) determined based on the engine parameters. The difference (1620) between the measured (1615) and desired (1610) exhaust back pressures is used to determine an exhaust pressure control duty cycle (1625). The base duty cycle (1605) is then adjusted by the exhaust pressure control duty cycle (1625) to give a turbocharger duty cycle (1630).